10/583,121

[CLAIMS]

1-13. (CANCELLED).

14. (CURRENTLY AMENDED) A method for manufacturing a nano-particulate electrode for Dye Solar Cells including the steps of:

providing an electrically conductive substrate,

forming a nano-particulate layer on the substrate,

electrolytically treating the nano-particulate layer in an electrolyte, wherein the electrolyte contains ions chemically different to the nano-particulate layer and the electrolytic treatment step comprises transferring the chemically different ions into the surface of the particles of the nano-particulate layer, and

applying a dye to the nano-particulate layer.

- 15. (CANCELLED).
- 16. (PREVIOUSLY PRESENTED) The method according to claim 14, further comprising the step of heating, following the electrolytic treatment step.
- 17. (PREVIOUSLY PRESENTED) The method according to claim 14, further comprising the step of partially removing material from the nano-particulate layer to the electrolyte during the electrolytic treatment step.
- 18. (WITHDRAWN) The method according to claim 14, further comprising the step of containing ions of UV, visual light and/or Infra red absorbing material in the electrolyte.
- 19. (WITHDRAWN) The method according to claim 18, further comprising the step of using dye as the absorbing material.
 - 20-22. (CANCELLED).
- 23. (PREVIOUSLY PRESENTED) The method according to claim 14, further comprising the step of the electrolytically treating including at least one step of transferring a predetermined amount of electrical charge between the electrolyte and the nano-particulate layer.
- 24. (PREVIOUSLY PRESENTED) The method according to claim 23, further comprising the steps of transferring the charge under constant current conditions with imposed voltage limits when voltage reaches imposed limit, a control circuitry switches from the constant current to the constant voltage mode, keeping the constant voltage mode until either the current drops below a predetermined current value or the predetermined amount of electrical charge has passed between the electrolyte solution and the nano-particulate electrode.
- 25. (PREVIOUSLY PRESENTED) The method according to claim 23, further comprising the step of the electrolytically treating including at least first and second half-

cycles, each transferring the predetermined amount of charge; in the first half-cycle the charge is transferred by movement of ions from the electrolyte to the nano-particulate layer, in the second half-cycle the charge is transferred by movement of ions from the nano-particulate layer to the electrolyte.

- 26. (PREVIOUSLY PRESENTED) The method according to claim 25, further comprising the step of the electrolytically treating including at least first and second cycles and a predetermined charge in the second cycle is larger than in the first cycle.
- 27. (CURRENTLY AMENDED) The method according to claim 14, further comprising the step of dissolving yttrium <u>chloride</u> [[salts]] in the electrolyte to yield the chemically different ions.
 - 28. (CANCELLED).
- 29. (CURRENTLY AMENDED) A method for manufacturing a nano-particulate electrode for Dye Solar Cells including the steps of:

providing an electrically conductive substrate,

forming a nano-particulate layer on the substrate,

electrolytically treating the nano-particulate layer in an electrolyte, wherein the electrolyte contains ions chemically different to the nano-particulate layer and the electrolytic treatment step comprises transferring the chemically different ions into the surface of the particles of the nano-particulate layer to a depth of approximately 40 Angstroms, and

applying a dye to the nano-particulate layer.

30. (CURRENTLY AMENDED) The method according to claim 29, further comprising the step of dissolving yttrium <u>chloride</u> [[salts]] in the electrolyte to yield the chemically different ions.